REMARKS

The objection to the specification regarding the drawing descriptions has been addressed with the specification amendments above.

35 USC Section 112 Rejections

The contradictory language of "at least one" and "each article" has be addressed with the cancellation of claims 1 – 5. The "at least one protrusion" language is not in the added claims.

The enablement rejection of claims 1 – 5 has been addressed with the cancellation of claims 1 - 5. The "at least one protrusion" language is not in the added claims.

35 USC Section 103 Rejections

The 35 USC 103 rejection has been addressed with the cancellation of claims 1-5. The new added claims utilize the terminology "elongate beads" which is not found in the cited references. As to the rejection of claims 4 and 5, although this rejection is traversed, substantial additional limitations have been added to the new claims to better distinguish the claimed invention from the cited art.

The double patenting rejection of paragraphs 8 and 9 is addressed with the attached terminal disclaimer and the cancellation of claims 1 – 5.

Respectfully submitted,

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Douglas J. Christensen

ATTACHMENT
REDLINED AMENDMENT

In the Specification

FIG[S]. 20A[-D] are top plan views of upper sides of wafer guides showing various embodiments of the invention.

FIGS. 20B are top plan views of upper sides of wafer guides showing various embodiments of the invention.

FIGS. 20C are top plan views of upper sides of wafer guides showing various embodiments of the invention.

FIGS. 20D are top plan views of upper sides of wafer guides showing various embodiments of the invention.

FIGS. 21A[-D] [are] is a front views of the wafer guide[s] of FIG[S]. 20A[-D].

FIGS. 21B is a front views of the wafer guides of FIG. 20B.

FIGS. 21C is a front views of the wafer guides of FIG. 20C.

FIGS. 21D is a front views of the wafer guides of FIG. 20D.

[FIGS. 22A-D are side views of the wafer guides of FIGS. 20A-D and 21A-D.]

FIGS. 22A is a side views of the wafer guide of FIGS. 20A and 21A.

FIGS. 22B is a side views of the wafer guide of FIGS. 20B and 21B.

FIGS. 22C is a side views of the wafer guide of FIGS. 20C and 21C.

FIGS. 22D is a side views of the wafer guide of FIGS. 20D and 21D.

[FIGS. 23A-D are cross-sectional views from above through an H-bar wafer carrier showing the wafer support at various insertion retraction positions.]

FIGS. 23A is a cross-sectional view from above through an H-bar wafer carrier showing the wafer support at an insertion retraction position.

FIGS. 23B is a cross-sectional view from above through an H-bar wafer carrier showing the wafer support at an insertion retraction position.

FIGS. 23C is a cross-sectional view from above through an H-bar wafer carrier showing the wafer support at an insertion retraction position.

FIGS. 23D is a cross-sectional view from above through an H-bar wafer carrier showing the wafer support at an insertion retraction position.

Claims As Amended

Please cancel claims 1-5. Please add the following new claims.

6. A wafer carrier for holding wafers in a substantially horizontal arrangement, the wafers having a lower surface, the carrier having an open front, a backside, a top portion, a bottom portion, a left side and a right side, the carrier further comprising:

a pair of wafer support columns extending from the top portion to the bottom portion, one support column located at the right side and one located at the left side, each wafer support

column comprised of a plurality of vertically arranged shelves, each shelf comprised of at least two upwardly extending elongate beads oriented inwardly with respect to the wafers for providing minimal contact with the lower surface of a wafer at each bead, each shelf further having an insertion level and a seating level for a wafer, whereby a wafer may be inserted into the carrier through the open front at an insertion level and lowered to sit on the upwardly extending beads at the seating level.

7. The wafer carrier of claim 6, wherein each shelf is further comprised of a forward stop positioned at the seating level at least partially forward and inwardly of the upwardly extending beads thereby interfering with the forward movement of a wafer seated in said shelf, each shelf further having a rearward stop positioned rearwardly and inwardly of the upwardly extending beads thereby interfering with the rearward
movement of a wafer in said shelf, said forward stop not extending into the insertion level whereby the wafer may be inserted and removed at the insertion level without interference with said forward stop.

8. The wafer carrier of claim 6 further comprising a molded outer transparent shell extending around and enclosing the left side, the backside and the right side and further comprising a door for closing the open front.

9. The wafer carrier of claim 8 wherein each column of wafer support shelves are formed separately from the outer shell and wherein the columns are attached to the outer shell.

10. The wafer carrier of claim 8 wherein each column of shelves is separately formed from the outer shell and each column is formed of a static dissipative material,

wherein the carrier further comprises a plurality of parts formed of static dissipative plastic material, wherein said parts are conductively connected by way of static dissipative plastic.

11. The wafer carrier of claim 10 wherein the static dissipative plastic is configured as at least one jumper extending from one part to another part.

12. The wafer carrier of claim 10 wherein said parts include a robotic flange, a side handle, and a bottom base portion having an equipment interface said bottom base portion separately formed from the outer shell and formed of a static dissipative plastic material, said robotic flange separately formed from the outer shell and formed of a static dissipative plastic material

13. The wafer carrier of claim 12 wherein the bottom base portion comprises a kinematic coupling.

14. A wafer carrier for holding wafers, the wafer carrier having an open front, an open interior, a closed backside, a top portion, a bottom base portion, a closed left side, a closed right side, a pair of wafer supports positioned in the open interior, a pair of side wall handles and a robotic flange at the top portion the carrier, the robotic flange, the side wall handles, the wafer supports, and the bottom base portion all formed of static dissipative plastic and conductively connected together.

15. The wafer carrier of claim 14 further comprising a conductive plastic jumper.

16. The wafer carrier of claim 15 wherein the conductive plastic jumper is fixed in the interior of the wafer carrier.

17. The wafer carrier of claim 15 wherein the conductive plastic jumper is connected to one of the side wall handles.

18. A wafer carrier for holding wafers, the wafer carrier having an open front, an open interior, a nonconductive plastic shell, a top, a bottom base portion, a closed left side, a closed right side, a pair of wafer supports positioned in the open interior, a pair of side wall handles attached to the nonconductive plastic shell, a robotic flange at the top, the robotic flange, the side

wall handles, the wafer supports, and the bottom base portion all formed of static dissipative plastic and conductively connected together.

19. The wafer carrier of claim 18 further comprising a kinematic coupling on the bottom base portion.

20. The wafer carrier of claim 18 further comprising a conductive plastic jumper providing a conductive connection.

21. The wafer carrier of claim 18 wherein the plastic shell is transparent.